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10/692,217	10/23/2003	Peter J. Ulintz	109770.0018	8227
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ROETZEL & ANDRESS 1375 EAST 9TH STREET CLEVELAND, OH 44114			EXAMINER CULBRETH, ERIC D	
			ART UNIT 3616	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

**Application No.**

10/692,217

**Applicant(s)**

ULINTZ, PETER J.

**Examiner**

Eric Culbreth

**Art Unit**

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Specification***

1. The disclosure is objected to because of the following informalities: On page 6, line 1 "2-4" should be "2A-4" (there is no Figure 2). (Although applicant requested this change in the amendment filed 5/26/09, the request was not proper – it should have stipulated where the paragraph was to be placed and what was to be replaced -- it should have been requested that the paragraph beginning at page 6, line 1 of the specification be replaced with this paragraph.)

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 11-12, 15-19, 21-23, 26-28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fevre et al US005758545, of record.

Fevre et al discloses a telescoping assembly configured for telescoping motion between an inner jacket 3 and outer jacket 2 (abstract) and a sleeve 5 (Figures 6-7) located between the inner and outer jackets, the column comprising inner jacket 3 having a first and second end, outer jacket 2 having a first and distal end with the second end of the inner jacket located inside the outer jacket and extending through the distal end of the outer jacket. Sleeve 5 has internal and external ribs 21, 22 contacting the jackets. The internal ribs 22 are outside the outer surface of the inner jacket (claim

11). The internal and external ribs are aligned along the sleeve axis and offset (claims 12, 23). Upon inspection in Figure 7, a width dimension of the internal ribs is greater than an external rib (claims 15, 28), and the thickness of an internal and external rib and sleeve wall is at least equal to a distance between the jackets (claim 16). A segment 8 of Fevre et al's sleeve extends past the outer sleeve (claim 17). The sleeve is able to flex between the facing jacket surfaces (abstract where the ribs of the sleeve are flexible)(claim 18), with the sleeve fixed to the outer jacket by block 9 and the inner jacket telescoping (claims 19 and 22). The internal ribs contact the outer surface of the inner jacket (claim 21). As the sleeve is thermoplastic that flexes (abstract, column 6, lines 65-66) and the tubes are metal (column 7, lines 8-12), the sleeve material is more flexible than the jackets (claim 26). Sleeve 5 is substantially within the outer jacket (claim 27). The ribs do not extend through the outer surface of the inner jacket (claim 30). Regarding the new limitations added to claims 15 and 21, the shape of the wall between the internal and external ribs (i.e., parallel to the jackets with a constant distance, etc.) is an obvious matter of design choice, as the specification gives no specific reason or critical purpose for the wall shape between the ribs, and the sleeve of the application would appear to function just as well as the sleeve of Fevre et al (the change in shape of the wall between the ribs would not seem to make a difference).

4. Claims 1-3, 5-10, 13, 20, 24 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fevre et al US005758545, of record in view of Burkhard et al US005722300, of record.

Fevre et al disclose a telescoping steering column assembly configured for telescoping relative movement between an outer jacket 2 and an inner jacket 3 (abstract) comprising outer jacket 2 with first and second ends and inner jacket 3 with a first end received telescopically in outer jacket 2's second end. A sleeve or sheath 5 (Figures 6-7) has a wall inside the outer jacket at the second end of the outer jacket, and the first end of the inner jacket is positioned inside the sleeve. The assembly is configured for relative telescoping movement between the outer and inner jacket the facing surfaces of the jackets contacting opposite faces of the sleeve. Internal ribs 22 are entirely outside the inner jacket, and external ribs 21 contacting the outer jacket as well as the internal rib are aligned with a longitudinal axis of the sleeve. However, Fevre et al is not clear about where the end of the inner jacket is positioned relative to the sleeve. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fevre et al to include the end of the inner jacket positioned within the sleeve as taught by Burkhard et al's sleeve 56 with inner jacket end 56 positioned within inasmuch as applicant's end in Figure 1 in order to arrange the sleeve and ends using an alternative arrangement in steering columns, as such a modification would yield predictable results (claims 1, 7). Regarding the new limitations added to claim 1, the shape of the wall between the internal and external ribs (i.e., parallel to the jackets with a constant distance, etc.) is an obvious matter of design choice, as the specification gives no specific reason or critical purpose for the wall shape between the ribs, and the sleeve of the application would appear to function just

as well as the sleeve of Fevre et al (the change in shape of the wall between the ribs would not seem to make a difference).

Fevre et al's ribs 21, 22 are offset in Figure 7 (claims 2, 8), but arranging biasing ribs aligned with the internal ribs would be obvious in view of Fevre et al's embodiment in Figures 1-5, where the portions of tongues 15 and 18 engaging the inner and outer jacket are radially aligned, and spheres 40 of Burkhard et al, which have radially aligned surfaces engaging the inner and outer jacket (claims 3, 13, 24). Upon inspection in Figure 7 of Fevre et al, the width and hence surface area of the internal ribs is greater than the external ribs (claims 5, 9). The combined thickness of the ribs and sleeve in Fevre et al's Figure 7 is at least equal to the distance between the outer and inner jackets (claim 6). As the ribs are flexible (abstract), and the sleeve is made of one piece with its wall approximating the thickness of the ribs, the wall of the sleeve is also flexible (claim 10). Fevre et al's sleeve 5 is fixed relative to the outer jacket by block 9, with the inner jacket telescoping within the outer jacket and sleeve (claims 19, 22). In the combination Burkhard et al teaches the inner jacket 26 fixed, the sleeve secured to the outer jacket, and the outer jacket and sleeve telescoping relative to the inner sleeve (claim 20). Forming the wall of the sleeve thicker than the ribs would be obvious in the combination as taught by the spheres 40 of Burkhard et al in the combination, which have surfaces extending toward and contacting facing walls of jackets that do not extend a distance from sleeve 44 that is equal to sleeve 44's thickness (claim 29).

5. Claims 14 and 25 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Fevre et al in view of Barton et al US006389923B1, of record.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fevre et al to include a bonding agent between the sleeve and outer jacket as taught by Barton et al (column 2, lines 10-18, where an adhesive is used between the sleeve 3 and outer column member 1) in order to better retain the sleeve securely within the outer tube (column 2, lines 12-18 of Barton et al).

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fevre et al in view of Burkhard et al as applied to claim 1 above, and further in view of Barton et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fevre et al and Burkhard et al to include a bonding agent between the sleeve and outer jacket as taught by Barton et al (column 2, lines 10-18, where an adhesive is used between the sleeve 3 and outer column member 1) in order to better retain the sleeve securely within the outer tube (column 2, lines 12-18 of Barton et al). In the combination the injected adhesive would flow between the external ribs.

7. Claims 11-12, 15-19, 21-23, 26-28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fevre et al US005758545, of record in view of Milton et al US3703105, of record.

Fevre et al discloses a telescoping assembly configured for telescoping motion between an inner jacket 3 and outer jacket 2 (abstract) and a sleeve 5 (Figures 6-7) located between the inner and outer jackets, the column as best understood comprising inner jacket 3 having a first and second end, outer jacket 2 having a first and distal end with the second end of the inner jacket located inside the outer jacket and extending through the distal end of the outer jacket. Sleeve 5 has internal and external ribs 21, 22 contacting the jackets. The internal ribs 22 are outside the outer surface of the inner jacket (claim 11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fevre et al to include walls of the sleeve between the inner and outer ribs parallel to and equally spaced from jackets in view of Milton et al's sleeve 54 in Figure 4 in order support or bear the ribs with a sleeve of alternative shape, as such a sleeve shape would yield predictable results. The internal and external ribs are aligned along the sleeve axis and offset (claims 12, 23). Upon inspection in Figure 7, a width dimension of the internal ribs is greater than an external rib (claims 15, 28), and the thickness of an internal and external rib and sleeve wall is at least equal to a distance between the jackets (claim 16). A segment 8 of Fevre et al's sleeve extends past the outer sleeve (claim 17). The sleeve is able to flex between the facing jacket surfaces (abstract where the ribs of the sleeve are flexible)(claim 18), with the sleeve fixed to the outer jacket by block 9 and the inner jacket telescoping (claims 19 and 22). The internal ribs contact the outer surface of the inner jacket (claim 21). As the sleeve is thermoplastic that flexes (abstract, column 6, lines 65-66) and the tubes are metal (column 7, lines 8-12), the sleeve material is more flexible than the jackets



(claim 26). Sleeve 5 is substantially within the outer jacket (claim 27). The ribs do not extend through the outer surface of the inner jacket (claim 30).

8. Claims 1-3, 5-10, 13, 20, 24 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fevre et al US005758545, of record in view of Burkhard et al US005722300, of record and Milton et al, of record.

Fevre et al disclose a telescoping steering column assembly configured for telescoping relative movement between an outer jacket 2 and an inner jacket 3 (abstract) comprising outer jacket 2 with first and second ends and inner jacket 3 with a first end received telescopically in outer jacket 2's second end. A sleeve or sheath 5 (Figures 6-7) has a wall inside the outer jacket at the second end of the outer jacket, and the first end of the inner jacket is positioned inside the sleeve. The assembly is configured for relative telescoping movement between the outer and inner jacket the facing surfaces of the jackets contacting opposite faces of the sleeve. internal ribs 22 are entirely outside the inner jacket, and external ribs 21 contacting the outer jacket as well as the internal rib are aligned with a longitudinal axis of the sleeve. However, Fevre et al is not clear about where the end of the inner jacket is positioned relative to the sleeve. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fevre et al to include the end of the inner jacket positioned within the sleeve as taught by Burkhard et al's sleeve 56 with inner jacket end 56 positioned within inasmuch as applicant's end in Figure 1 in order to arrange the sleeve and ends using an alternative arrangement in steering columns, and to include a sleeve with cylindrical walls between the ribs matching the inner and outer jackets as

taught by Milton et al in order to use an alternative equivalent sleeve wall shape in the art, as such modifications would yield predictable results (claims 1, 7). Fevre et al's ribs 21, 22 are offset in Figure 7 (claims 2, 8), but arranging biasing ribs aligned with the internal ribs would be obvious in view of Fevre et al's embodiment in Figures 1-5, where the portions of tongues 15 and 18 engaging the inner and outer jacket are radially aligned, and spheres 40 of Burkhard et al, which have radially aligned surfaces engaging the inner and outer jacket (claims 3, 13, 24). Upon inspection in Figure 7 of Fevre et al, the width and hence surface area of the internal ribs is greater than the external ribs (claims 5, 9). The combined thickness of the ribs and sleeve in Fevre et al's Figure 7 is at least equal to the distance between the outer and inner jackets (claim 6). As the ribs are flexible (abstract), and the sleeve is made of one piece with its wall approximating the thickness of the ribs, the wall of the sleeve is also flexible (claim 10). Fevre et al's sleeve 5 is fixed relative to the outer jacket by block 9, with the inner jacket telescoping within the outer jacket and sleeve (claims 19, 22). In the combination Burkhard et al teaches the inner jacket 26 fixed, the sleeve secured to the outer jacket, and the outer jacket and sleeve telescoping relative to the inner sleeve (claim 20). Forming the wall of the sleeve thicker than the ribs would be obvious in the combination as taught by the spheres 40 of Burkhard et al in the combination, which have surfaces extending toward and contacting facing walls of jackets that do not extend a distance from sleeve 44 that is equal to sleeve 44's thickness (claim 29).

9. Claims 14 and 25 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Fevre et al in view of Milton et al as applied to claims 11 and 21 above and further in view of Barton et al US006389923B1, of record.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fevre et al and Milton et al above to include a bonding agent between the sleeve and outer jacket as taught by Barton et al (column 2, lines 10-18, where an adhesive is used between the sleeve 3 and outer column member 1) in order to better retain the sleeve securely within the outer tube (column 2, lines 12-18 of Barton et al).

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fevre et al in view of Burkhard et al and Milton et al as applied to claim 1 above, and further in view of Barton et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fevre et al, Burkhard et al and Milton et al to include a bonding agent between the sleeve and outer jacket as taught by Barton et al (column 2, lines 10-18, where an adhesive is used between the sleeve 3 and outer column member 1) in order to better retain the sleeve securely within the outer tube (column 2, lines 12-18 of Barton et al). In the combination the injected adhesive would flow between the external ribs.

***Response to Arguments***

11. Applicant's arguments filed 5/26/09 have been fully considered but they are not persuasive.

In regard to applicant's arguments on pages 3-4 of the remarks that the 103 rejection of claims 11-12, 15-19, 21-23, 26-28 and 30 as unpatentable over Fevre '545 is not proper because the flat walls of the invention increase the amount of surface area between the ribs thereby permitting secure bonding of the sleeve to the outer jacket (increases friction), this has not been found persuasive because the specification gives no such attribute to the flat walls of the invention (as stated in the rejection, the specification gives no stated reason or critical purpose for the wall shape between the ribs, and the sleeve of the application would appear to work just as well as Fevre et al). In fact, Fevre et al's curved walls between ribs may actually improve friction over the disclosed ribs of the invention by causing the ribs to have less give. Regarding the arguments on page 4 that Fevre et al depends on a block on the sheath to secure the sheath is not persuasive because the claims do not exclude securing the sheath with a block and because Fevre et al's sheath's ribs come into contact with the jacket (abstract), which is all that is required by the claims listed in this rejection (i.e., these rejected claims do not include limitations about how much friction is applied, so as long as Fevre et al has flexible elements on the sheath meeting applicant's claimed structure, the claims are met where the shape of the walls between the ribs are not patentably distinguishing, as is the case here).

Regarding the arguments on pages 4-6 of the remarks that claims 1-3, 5-10, 13, 24 and 29 are patentable over Fevre et al in view of Burkhard et al '300 because Burkhard et al's inner element does not come into contact the bushing and because Burkhard et al does not take into account the situation where the sleeve and inner sleeve are in direct contact is not persuasive because Burkhard et al is not relied upon to teach the sleeve and inner element in contact with each other (that is in Fevre et al, the primary reference) and because Burkhard et al's sleeve 56 does in fact contact the inner jacket 54 at the left end of sleeve 56 in Figure 3; hence Burkhard et al does in fact account for the situation where the sleeve and inner jacket directly contact. The applicant's argument that the tongue mechanism of Fevre et al nor the spheres of Burkhard et al are sleeves is not persuasive because the tongue mechanism and spheres are on sleeves, just like the applicant's ribs. Hence the primary reference and the combination would teach biasing projections from the sleeve (tongues, spheres, ribs) aligned with internal tongues, sphere peripheries, ribs, etc. While Burkhard et al's sphere surfaces do not engage the inner and outer jacket, Fevre et al, the primary reference, teaches ribs/projections from the sleeve contacting inner and outer jackets. The applicant cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Similarly, regarding the arguments bridging pages 5-6 that claim 29 should not be rejected because Burkard et al does not disclose a sleeve of the claimed

configuration and the because the spheres function in an entirely different manner, this is not persuasive because Fevre et al in the combination as the primary reference teaches a sleeve with the claimed configuration with ribs.

On page 6 of the remarks the applicant argues that claims 4, 14 and 24 should not be rejected because Barton et al's "bush" is not a cylindrical sleeve and [the bonding agent] does not secure a cylindrical sleeve to a cylindrical jacket. This is not persuasive because the shaft is for a steering column (abstract), which would be cylindrical, along with the matching sleeve or bush 3. At any rate in the combination, Fevre et al, the primary reference, teaches a cylindrical sleeve and jacket.

On pages 6-8 of the remarks, the applicant argues that claims 11-12, 15-19, 21-23, 26-28 and 30 should not be rejected with Fevre et al in view of Milton et al '105 because Milton et al's steering column is not a collapsible column but rather has a locking sleeve and tabs. However, this is not found persuasive because the differences cited between Milton et al and Fevre et al (one collapses, one doesn't) would not prohibit the skilled artisan from combining the teaching references so that Fevre et al includes the sleeve equally spaced from the jackets and the ribs aligned as taught by Milton et al. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning (pages 7-8 of applicant's remarks), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

This applies to the rejection of claims 1-3, 5-10, 13, 20-24 and 29 argued on page 8 of the remarks as well.

### ***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Culbreth whose telephone number is 571/272-6668. The examiner can normally be reached on Monday-Thursday, 9:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571/272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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